

## **ABSTRACT OF THE DISCLOSURE**

A device comprising a catheter (1) with a lumen, a proximal end (A) and a closed distal end (B) for inserting into the human or animal body cavity. A signal generator (2) generates an excitation signal, and a transmitting transducer (3) transmits a corresponding acoustic signal into the lumen of the catheter. A receiving transducer (5) receives reflections of the acoustic signal from the lumen of the catheter. A low-frequency pressure transducer (42) senses the pressure in the lumen of the catheter and outputs a signal representing low-frequency pressure variations in the lumen. A signal-processing device (4, 6) receives and analyses the output signals from the receiving transducer (5) and the pressure transducer (42). Information can be obtained about the elasticity of the body cavity walls.